

## **Abstract of the Disclosure**

**A novel program for supporting design of a  $\gamma'$  precipitation strengthened platinum group element-added Ni-based superalloy. To support the design, a computer is allowed to function as input means (1) for inputting the composition, working temperature, and working stress of an Ni-based superalloy, storage means (2) for previously storing the constituent elements of the Ni-based superalloy, the structure factor calculation formula thereof, and the alloy characteristics calculation formula thereof, structure factor calculating means (3) for calculating the structure factor from the alloy composition by using the structure factor calculation formula read from the storage means (2), alloy characteristics calculating means (4) for calculating an alloy characteristics from the alloy composition, the structure factor, the working temperature, and the working stress by using the alloy characteristics calculate formula read out of the storage means (2), and output mean (5) for outputting the structure factor and alloy characteristics together with the alloy composition. Therefore, alloy characteristics analysis and alloy composition search of a  $\gamma'$  precipitation strengthened platinum group element-added Ni-based superalloy are simply, easily, and efficiently conducted. A design supporting device therefor is also disclosed.**

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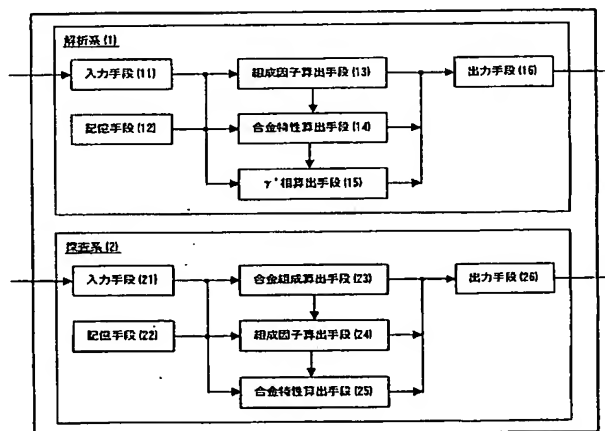
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[続葉有]

(54) Title: GAMMA DASH PRECIPITATION STRENGTHENED PLATINUM GROUP ELEMENT-ADDED Ni-BASED SUPERALLOY DESIGNING SUPPORT PROGRAM AND GAMMA DASH PRECIPITATION STRENGTHENED PLATINUM GROUP ELEMENT-ADDED Ni-BASED SUPERALLOY DESIGNING SUPPORT APPARATUS

(54) 発明の名称:  $\gamma'$ 析出強化型白金族元素添加Ni基超合金設計支援プログラムおよび $\gamma'$ 析出強化型白金族元素添加Ni基超合金設計支援装置



(1)...ANALYSIS SYSTEM  
 (11)...INPUT MEANS  
 (12)...STORAGE MEANS  
 (13)...COMPOSITION FACTOR CALCULATING MEANS  
 (14)...ALLOY CHARACTERISTIC CALCULATING MEANS  
 (15)...GAMMA DASH PHASE CALCULATING MEANS  
 (16)...OUTPUT MEANS

(2)...SEARCH SYSTEM  
 (21)...INPUT MEANS  
 (22)...STORAGE MEANS  
 (23)...ALLOY COMPOSITION CALCULATING MEANS  
 (24)...COMPOSITION FACTOR CALCULATING MEANS  
 (25)...ALLOY CHARACTERISTIC CALCULATING MEANS  
 (26)...OUTPUT MEANS

(57) Abstract: A novel program for supporting design of a gamma dash precipitation strengthened platinum group element-added Ni-based superalloy. To support the design, a computer is allowed to function as input means (1) for inputting the composition, use temperature, and use stress of an Ni-based superalloy, storage means (2) for previously storing the constituent elements of the Ni-based superalloy, the structure factor calculation formula thereof, and the alloy characteristic calculation formula thereof, structure factor calculating

ATTACHMENT E

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